

National Science Board

February 13, 2006

The Honorable Bart Gordon
House of Representatives
2304 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Gordon:

On behalf of the National Science Board (NSB, the Board), I want to express our appreciation for the strong support of the House Science Committee for the National Science Foundation and for precollege education in science, technology, engineering and mathematics (STEM) fields. We appreciate the opportunity to comment on your recently introduced bill, "10,000 Teachers, 10 Million Minds Science and Math Scholarship Act." Your bill addresses a number of our shared concerns for the future of U.S. leadership in science and technology, which is dependent on a technically and scientifically educated workforce and citizenry.

NSB has issued a number of reports and policy statements over the last decade,¹ which have carefully analyzed relevant data and issues and expressed our explicit concerns with regard to the U.S. system for precollege STEM education and the teaching workforce. Many of the Board's recommendations in these issuances are consistent with your proposed legislation and the recent report of the National Academies,² which serves as the background for your bill. The Board strongly supports the general objectives of the proposed legislation with regard to the precollege STEM teaching workforce.

The critical goal of your bill, which the Board shares, is to attract and retain the best and brightest students and teaching professionals in STEM education. The focus on the quality of STEM precollege teachers is crucial. Therefore we suggest the proposed legislation add language that would:

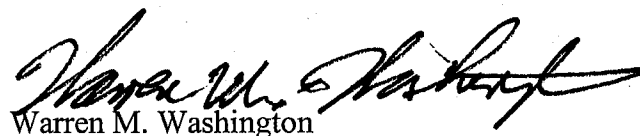
1. Increase the pool of highly qualified teachers by expanding eligibility for the bill's proposed program to include the best STEM undergraduates and others not currently in the teaching profession, so long as they meet educational requirements to become teachers. Specifically, consideration should be given to increasing flexibility for students and institutions with regard to:
 - eligibility for the proposed masters' programs to include excellent students from all academic backgrounds, and especially those majoring in chemistry, physics and mathematics;
 - eligibility for scholarship support for masters' programs that require more than 2 years to complete, especially for teachers and others in the workforce interested in entering the teaching profession who can attend programs only part time;

- eligibility for institutions with high quality science and engineering programs, regardless of whether or not they have schools of education. Many of our Nation's finest liberal arts colleges and science and technology universities do not have colleges of education. Students majoring in science and engineering from these kinds of institutions have higher rates of graduate professional education than the national average. The Board would not want these students to be denied access to the advantages of undergraduate and graduate professional education in K-12 education envisioned in this bill.
2. Ensure the high quality of the STEM education programs offered by institutions, especially by assessing outcomes with respect to STEM K-12 student performance;
 3. Ensure scholarship students receive high quality professional development and mentoring as part of the program by setting clear, practical standards for institutions;
 4. Provide incentives to scholarship recipients on graduation and teachers already in the labor force to work in the schools that are neediest with respect to shortages of qualified science and mathematics teachers and encourage them to remain in those schools.

We further applaud your bill for providing professional development programs for teachers, especially federally funded summer institute programs. We encourage efforts and incentives to increase investment and participation by other sectors in improving the quality of the STEM workforce.

Again, we appreciate the opportunity to offer our comments on this important bill. I would be happy to meet with you and your staff personally to discuss this matter.

Sincerely,



Warren M. Washington
Chairman

¹ National Science Board, *Preparing Our Children* (NSB-99-31); *Failing Our Children* (NSB-98-154), *The Science and Engineering Workforce – Realizing America's Potential* (NSB-03-69); Letter to Stanley Litow, President, IBM Foundation, 2005; *America's Pressing Challenge—Building A Stronger Foundation* (NSB-06-02) (to be released with *Science and Engineering Indicators 2006*).

² National Academies, *Rising Above the Gathering Storm/Energizing and Employing America for a Brighter Economic Future* (2005).